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The FOREST PIONEER



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TIMBER FOR DEFENSE

ISSUED SEMI ANNUALLY BY THE REGIONAL FORESTER
ALBUQUERQUE NEW MEXICO

SECOND HALF 1941

REGION 3



OPERATION

DIVISION OF PERSONNEL MANAGEMENT FOR R-3

Region Three now has a full-fledged Division of Personnel Management with Alva A. Simpson in charge as Assistant Regional Forester. For a long time it has been realized that Personnel Management, training and related subjects required more time and attention than a busy Chief of Operation could make available and that both Operation and Personnel Management work were going to suffer if a division of duties could not be brought about. The new arrangement has the added advantage of giving the Personnel Management work an independent functional status coordinate with the other recognized Divisions, and gives the Regional Forester and Associate the advantage of an additional qualified all-around staff assistant for consultation on general Regional policies and problems.

Alva A. Simpson brings to his new assignment, a wealth of Service-wide experience that peculiarly fits him for his new job. Entering the Forest Service as assistant forest ranger on the old Hayden National Forest May 1, 1909, his work in the Forest Service has been continuous except for a $4\frac{1}{2}$ year period, 1919 to 1923, when he engaged in the sheep business and also served as Road Supervisor of Saguache County, Colorado. His Service assignments include work as District Ranger and Deputy Supervisor on the Arapaho National Forest, R-2; 4 years as Forest Supervisor of the Arapaho and Cimarron National Forests, R-2; 10 years as Forest Supervisor of the Custer and Beaverhead National Forests, R-1; a year's assignment in 1915 to cooperate with the Biological Survey in certain northern elk herd investigations; a year's assignment in 1924 as range examiner assigned to the Western Range Survey in R-1, which covered the western forests in that Region; a fractional year's detail to Operation, R-1, on emergency work, personnel management, etc.; a short two years' assignment as Chief of Lands and Associate Director of the Prairie States Forestry Project, 1934 to 1936; something over a year's assignment to AAA work for the initiation and administration of the AAA Range Survey Project; and since October 1, 1937, his assignment to the Division of Operation in R-3 on various projects including an 11 months' detail to the Primary Base Committee, which took him into four of the western regions and involved several months' work in Washington.

FCWP

SUPERVISOR WINN RECOVERS FROM SERIOUS INJURIES

Supervisor Winn of the Coronado is again back at his desk after 17 weeks of recovering from injuries sustained on May 7 when he stepped out of his car at Madera Canyon and walked around behind it and it rolled back knocking him down, the rear wheels passing over his body and dragging him 15 feet when the car hit a building which stopped it. X-rays revealed a fractured pelvis, two fractured ribs and a broken hip, in addition to numerous bad bruises and head cuts. All through his serious illness Mr. Winn displayed great fortitude and his desire to get well no doubt materially assisted in his recovery.

It was a long, hard pull and required a tremendous amount of patience and courage and the personnel of the Region as well as his many friends are happy to know of his recovery.

CIBOLA GIVES FIRE TRAINING TO THE STATE GUARD

The Cibola's fire training program for State Guard Units in the Cibola area began on the evening of June 12 when three Albuquerque companies of the State Guard met at the Armory for a "classroom" session. Major W. C. Ellis, Battalion Commander, judging from remarks in his introduction, seemed to think quite highly of the Forest Service. Assistant Supervisor, Perl Charles, discussed general phases of the forest fire program on and near the Forest. Ranger Zane G. Smith gave the longest talk of the evening, covering safety for fire fighters, a step-by-step outline of the attack on a forest fire, and several fire problems. His assistant, Archie Rea, explained the use of the Osborne fire finder, fire tools and other equipment, all of which were neatly displayed on exhibit racks.

Of the 102 officers and men forming the three companies, 90 voluntarily showed up for the first session. The men received this session in a favorable and enthusiastic manner. The Cibola staff is to be complimented on the way they planned their program. Lieutenant Colonel William Powell, State Commander of the State Guard arrived in Albuquerque during this session and stayed throughout. He afterwards expressed his complete approval of the fire training idea and his gratitude for Forest Service cooperation.

On Sunday morning at 8:30, the three companies gathered at Tijeras Ranger Station in the Sandia Mountains and proceeded from there to a point where a field problem in timber and brush on a varied terrain was presented. The field session, completing the initial training program for the Albuquerque guardsmen, required about 6 hours.

PERSONNEL CHANGES

Walter G. Thomson, who has been in Region Three since 1933 and has been working in the office of Timber Management the past few years, has accepted a transfer to the office of State and Private Forestry in Region 6, effective July 1.

Harry Lane, Associate Architect in the Regional Office since 1937, has accepted a position with the Bonneville Dam Administration as Associate Architect and left for Portland, Oregon July 1.

Both Mr. Thomson and Mr. Lane have made a great many friends during their stay in Region Three who wish them success in their new positions.

ORGANIZATION CHANGE

Because the watershed management job cuts through all regular resource management lines, and to a greater or less degree affects and is affected by the policies and practices of all divisions, an organizational change has been put through in this Region which establishes watershed management directly under the Regional Forester. At various times in the past watershed management work or erosion control in its various phases has been attached to the Divisions of either Lands or Range Management.

The new organization plan now in effect has recently been approved by the Washington Office and W. G. Koogler will continue in charge of the Section, reporting directly to the Regional Forester and Associate Regional Forester.

FOREST OFFICERS CALLED TO MILITARY DUTY

Captain William L. Chapel, Jr. who has been in charge of the Pound Brothers Sale on the Santa Fe, has been called to active duty with the Air Corps.

District Ranger Floyd M. Hodgin of the Carson who holds a commission as First Lieutenant in the Organized Reserve Corps, was assigned to a Light Artillery Unit at Marfa, Texas in August.

FRENCH ON DETAIL

The Chief and the Solicitor have entered into an arrangement whereby one of the field law officers will be on detail in Washington at all times. Mr. French spent the month of August on this detail.

THE SITGREAVES OCCUPIES NEW OFFICES

After many years in the old building and a recent busy period of packing and hauling, the Sitgreaves National Forest staff has been rewarded by the privilege of occupying a new building constructed especially for its use. The move was made August 1.

Replacing the old office which had been occupied since 1928, the new building is of concrete brick construction and is said to be fire-proof throughout. The new building is on Oakland Avenue a short distance west of Porter Street.

R-3 MAN SELECTED FOR WASHINGTON TRAINING

From the applicants recommended by all regions for training in Washington, Assistant Ranger James A. Egan of the Big Springs District of the Kaibab is one of the two selected. The Washington Office states that competition was extremely close, making selections difficult and they would have wished to select at least two other men if they could have financed the training. The selection of Assistant Ranger Egan will allow him to obtain specialized training leading to a degree in personnel or administrative management. Needless to say this Region is gratified that Mr. Egan was selected.

REGION 7 MOVES FROM WASHINGTON

The headquarters of the Eastern Region (Region 7) of the Forest Service have been transferred from Washington, D.C. to Room 414 Bankers Security Building, Philadelphia, Pennsylvania. The move was made as part of the Department program of further decentralization to relieve congestion in the national capital.

FIRE COOPERATION

A memorandum of understanding between the Arizona Highway Patrol and the U. S. Forest Service has been entered into, in which the Highway Patrol will caution the public in the prevention of man-caused fires, report to the Forest Service any forest fires observed by the Patrol, handle traffic where fires occur in proximity to roads subject to public travel, assist in law enforcement and assist in the apprehension of violators of state fire laws whenever such apprehension is incidental to the performance of their regular patrol duties.

TRAINING CAMP

Twenty trainees, the product of 17 different universities and colleges, representing 10 National Forests, met at Fort Valley for training, lasting from September 22 to October 11. In attendance were six rangers, four assistant rangers, eight timber sale men, one landscape architect and one wildlife expert.

Regional Forester Pooler opened the meeting, giving early history of the Ft. Valley Training Camp, some of the traditions that had been established there and values of this type of training. "An all-important thing here," he said, "is building a Service-spirit of morale and esprit de corps." In touching on resource management, Mr. Pooler pointed out that 95 percent of the timber cut in the nation is on private land. Therefore, our job must eventually be big enough to bring about good management on all forested land. He urged that every member of the Service be familiar with the forestry program. In high-pointing the recent Salt Lake City meeting with Secretary Wickard, Mr. Pooler stated that the number one job in the Department of Agriculture today is the agricultural-production defense program. Needs for this program are measured in terms of (1) food needs for this country; (2) lease-lend needs; and (3) the stock-pile idea for the time when people in occupied European countries must be fed. "This," he said, "is the American Fifth Column in Europe."

In nearly all phases of training given at the camp, there were a number of trainees well qualified by experience to assist instructors. After initial training had been given by the instructor in charge, trainees were divided into groups of five each, which made it possible through rotation for each individual to get instruction and experience in the several phases of the jobs.

The first days of timber management devoted to marking sample plots, tree classification and scaling logs made the "timber beast" appear to be the bright fellow, but the grazing boys had their "day at court" later while teaching the group how to make range surveys and work problems centered around check sheets to accompany grazing applications. One "timber beast" thought range management had something to do with the kitchen stove.

Papers read by Mr. Salton and Mr. Wiltbank on timber management and range management received applause and requests were made for mimeographing and distribution.

Fred Baker reviewed recreation plans and objectives in the class room and conducted the trainees through two campgrounds and the Arizona Snow Bowl. The group was particularly interested in winter sports.

Wildlife got off to a good start with Dick Johnson, Harlen Johnson, Fosburg, Childress, Watkins and Snyder leading discussions on topics assigned to them in advance. Fred Johnson helped to summarize each discussion by giving wildlife objectives as recently approved for the Service. Dr. Shantz was particularly interesting to all. He continued, by request, after the usual quitting time and when the chow bell rang, keen interest still prevailed. Mr. Kartchner, State Game Warden, was present and showed a highly cooperative attitude toward the Forest Service.

We heard several remarks on Mr. King's I&E training, "He made a dry subject interesting by skillful presentation, plus witty remarks."

A burned-over area was used for training in fire control. Mr. Munro and Ranger Oldham presented problems on fire in its several phases of

development. Solutions were written up and later graded by Munro.

From Ed Sievers the group received training on land markers, platting and how to survey a plot of land described by subdivisions.

Mr. Adams' course on land laws was of great interest. The topics stimulated many questions and much note taking.

Watershed management was presented by Mr. Koogler by a talk with the use of color slides. He impressed the trainees with the high priority rating of watershed management in Region 3. Dick Lewis covered construction and preventive maintenance on fences, telephone lines and various structures in two days of field work. Using the four-step method of training, some effective work was done in teaching forest officers how to inspect and maintain structures. Charles Kerswill emphasized the high priority of preventive maintenance on motorized equipment in Region 3, read a series of questions and answers on the topic, and demonstrated correct inspection procedure.

Mr. Simpson talked on personnel management, giving clear, concise statements on policies and objectives and answered many questions by the group. A highlight of the training camp was range management. Wiltbank's excellent paper on the philosophy of range management, followed by identifying plants in the field, was a proper build-up for the training that came later on our three-day trip to the lower country under the supervision of Forest Supervisor Lee Kirby. Mr. Kirby's ultimate objective is to assure that man cooperates with Nature in maintaining forage and soil. His immediate objective was to teach young forest officers to "read" the land, to be able to see and interpret what meets the eye. Nature is a great healer and if given an even break will build her own dams to conserve soil and water, but plants must have vitality to live and the soil must be fed through un-used forage. Mr. Kirby's deep sincerity in the subject, his fine training attitude and the action he is now taking to remedy depleted conditions made a lasting impression on everyone.

Around the campfire at nights, songs and stories were popular. Mr. Randall, old-timer from Pine, joined the circle to give us early history of that part of Arizona. At another campsite, Bob Fraunberger gave an interesting talk on horses. Around the campfire, there seemed eminent a friendly bond that won't be forgotten.

TIMBER MANAGEMENT

R-3 N. F. CUT OF TIMBER DURING F. Y. 1941

The cut of timber from the National Forests in this Region during the fiscal year 1941, under commercial sales and exchange, amounted to 108,637 M feet. This was a slight reduction from the cut during the fiscal year 1940 when the cut was 110,583 M feet. The fiscal year 1941 cut was divided by states as follows:

Arizona 73,992 M feet

New Mexico 34,645 M feet

Sales at cost maintained their usual steady pace at just over one million feet. Approximately 80% of the volume was from the New Mexico forests. It was expected, in view of the increase in demand and price of forest products during the fiscal year 1941, that the cut of timber under cost and commercial sales and exchange during that period would be increased over that of 1940. Failure to meet that expectation is due to extremely difficult logging conditions beginning in December, 1940, which did not end until late in the spring of 1941 and in one operation, normal output is not yet under way.

HOW THE STATES BENEFIT FROM NATIONAL FORESTS

During the thirty-four years 1906 to 1940 for which figures are available in the Regional Office, the portion of National Forest Receipts which accrue, under the law, to the benefit of the States for schools and roads are as follows:

	Paid to State			
	School Section	25% Fund for Indemnity Fund	10% Road Fund Expended by F. S.	Total
Ariz.	\$ 1,015,861.69	\$2,380,804.91	\$ 870,409.37	\$4,267,075.97
N.Mex.	147,049.22	1,282,369.65	465,199.22	1,894,618.09
	\$ 1,162,910.91	\$3,663,174.56	\$1,335,608.59	\$6,161,694.06

The School Section Indemnity Fund is based on the area of school sections remaining in the Forests for which the State has not exercised a right of lieu selection.

The net receipts during this period amounted to approximately sixteen million dollars.

JUNIPER BERRIES NEEDED IN MANUFACTURING DRUGS

The Coconino has submitted an inquiry from California interests for information as to the source and supply of Juniperus communis commonly known as dwarf juniper. It seems that the war has reduced the supply or made it impossible to get some articles used in the drug trade. Juniperus communis is found only at high altitudes in the Southwest and is not plentiful. Three growing seasons are required to mature the berries. Information on the range of the tree and other material thought to be of value have been sent to the inquirer.

LUMBER CONSUMPTION INCREASES

Consumption of lumber increased substantially during 1940, it is indicated by estimates prepared by the Division of Forest Economics, Forest Service (June, 1941). Total estimated consumption for 1940 was 28,063 million feet as compared with 25,434 million feet for 1939. Of the 1940 total, softwood accounted for 23,616 million feet and hardwood for the remainder.

America used 213 board feet of lumber per capita during 1940, it is estimated. This was an increase over the 1939 consumption, which was 194 board feet, and over the 1938 consumption, which was 164 board feet.

STATE SALE INCREASING OPERATIONS

The State sale, being handled by the Apache personnel, now has five sawmills in operation. Thirteen saw crews are cutting logs for these mills and it is expected that the number will continue between 13 and 16 crews during the operating season. William H. Brainard, who is now on the Southwest Lumber Mill, Inc. sale on the Sitgreaves, is being transferred to the Apache to assist in handling the state sale work.

TIMBER SOLD VS. TIMBER CUT

During the past five calendar years the volume of timber cut in the National Forests in the region exceeded the volume sold. However, a check of the records covering the period from 1926 to 1940 inclusive, shows a relative close balance. Sales for the period totaled 1,447,843 M feet and the cut was 1,501,003 M feet. During the 15-year period stated, the volume sold exceeds the cut in seven years. These years were 1926, 1928, 1930, 1931, 1932, 1934 and 1935. This trend may indicate that a purchaser prefers the even numbered years.

RUSSIAN OLIVE TO BE USED IN SCS PLANTINGS

SOIL CONSERVATION of July, 1941, states that the Russian olive -- neither an olive nor exclusively Russian but (*Elaeagnus angustifolia*) from southern Europe and western Asia -- has turned out to be a plant of considerable worth for soil conservation planting, particularly in the western half of the United States. First introduced in 1897, it has since gone wild in several western states where it has proved itself able to withstand extreme drought, cold and considerable concentration of alkali.

For several centuries this shrub or small tree has been used in Europe for ornamental planting, a purpose it serves well in this country also. The Soil Conservation Service will plant nearly 2 million Russian olive plants this season. (By William R. Van Dersal)

SMALL SALES BUSINESS CONTINUES ACTIVE

The Santa Fe reports a sale of 175 M feet of stumpage at the rate of \$2.50 per M to take care of the needs of a small community mill near Gallina, New Mexico, and the Kaibab comes in with a sale of 200 M feet of overmature Douglas fir stumpage on the Kaibab North at a stumpage price of \$2.25 per M to meet the needs of a small mill supplying the southern Utah and Arizona strip local market.

LUMBER PRODUCTION

The lumber production census of 1939 shows a national cut of 15.4 per cent greater than that of 1938. However, it failed by over a billion board feet to reach the high mark set in 1937. Oregon, for the second time, is the leading state. The twelve western states accounted for 48 per cent of the national cut and 13 per cent of the mills.

TIMBER SALE ON THE SITGREAVES

A timber sale agreement covering some 7,000,000 feet of ponderosa pine and Douglas fir sawtimber on the Sitgreaves National Forest was approved August 5 in the regional office. The purchasers were Crandell and Wahl of Heber, Arizona. Stumpage rate was \$3 per M feet. The sale covers 1,500 acres. Volume to be reserved is not to exceed 50 per cent of the total stand. The contract provides that at least 80 per cent of the laborers engaged in the logging, transporting to the mill and milling of timber covered by the agreement, shall be residents of the communities of Heber, Clay Springs or Pinedale.

SALE OF 9 $\frac{1}{2}$ MILLION FEET OF TIMBER ON THE APACHE

The 9 $\frac{1}{2}$ million feet of ponderosa and Mexican white pine, Douglas and white fir on the Mangitas unit of the New Mexico division of the Apache National Forest advertised at \$2.25 per M, plus 25¢ per M for stand betterment for the pine and Douglas fir and 75¢ per M for white fir without any stand betterment deposit, drew two bids. The high bidder, the Southwest Lumber Mills, Inc. of McNary, Ariz. bid, including the deposit for stand improvement for the better species, \$3.06 per M and 75¢ for the white fir; the other bidder bid \$3 for the better species and \$1 per M for the white fir. It was estimated that there were only 200 M feet of white fir on the unit. The high bid increased the total return from the sale over \$5,000 or some 20% above the prices named in the advertisement.

KAIBAB TIMBER SALE

There was approved and sent for numbering a timber sale contract for 4,200 M feet of ponderosa pine saw timber on the Kaibab. The stumpage was sold to the Saginaw & Manistee Lumber Company of Williams, Arizona at \$2.50 per M feet. The contract is to be completed by December 31, 1944 and provides for retaining up to 60% of the merchantable volume of the stand.

This sale covers the scattered parcels of timber not considered accessible when the surrounding timber was cut or parcels which should be logged in connection with the timber rights of the company.

MANAGEMENT PLAN REVISION

The revision of the management plan covering the Sacramento Mountain Working Circle, Lincoln N.F., has been approved. This plan was originally prepared and approved in 1926. Because of the complicated pattern of ownership which consists of private timber rights, private, state and national forest lands, management of this circle presents a difficult problem. Cutting on this area was started nearly fifty years ago.

ENTOMOLOGIST VISITING INSECT AREAS

Dr. N. D. Wygant of Berkeley, California, assistant entomologist in the Bureau of Entomology and Plant Quarantine, arrived at the Regional Office August 20. He had stopped at Flagstaff enroute. After conferring with Assistant Regional Forester Randles, Dr. Wygant left on a tour of several forests in this Region where insect activity has been reported.

TIMBER SOLD

Davies and Mason were again the successful bidders for 1,100,000 feet B.M. of timber in the Pine and Rattlesnake Canyon drainage, Coronado N.F. As far as known now, this is the last block of timber that will be advertised for sale in the Chiricahua Division.

STUDY OF CUTTING ON 33-YEAR OLD CUTOVER AREA

About 1907 a portion of a section of ponderosa pine timber west of the town of Belmont on what is now the Kaibab National Forest was selectively cut. Many forest officers in the Region, no doubt, have seen the area as Highway 66 passes through it. Within the past year a right-of-way for a road change was clear-cut through the old cutting. Thomson of the Regional Office and Kartchner of the Coconino measured the volume on 2.8 acres of this right-of-way. They found the gross volume in 100 trees to be 25,010 bd. ft. or 8,932 ft. per acre. The stand cut proved to be quite sound. Unmerchantability expressed in percent of the gross was as follows: Lightning, 1.8%; rough tops 1.5%; heart rot 1.0%; forks, crooks, and miscellaneous deductions including breaks, .3%. This substantiates the findings of the Wing Mountain study of a low defect percentage in second cuts.

The trees were handled by tractors and the waste in stumps was high, amounting to 10.6%. This loss would not be sustained in a regular logging job. This small sample indicates that the sale man some 33 years ago did a careful marking job and that a reasonable reserve stand will produce another loggable crop within 30 to 40 years.

BLACK WALNUT YIELDS HIGHEST PRICED TIMBER

A U. S. Department of Agriculture news release based on the Forest Service annual summary of stumpage and log prices, discloses that the native American black walnut continues to yield the highest priced timber in the United States. Black walnut logs brought an average price of \$36.21 per thousand board feet for all states, although one purchase at a price in excess of \$200 was reported.

Average prices for all hardwoods, including black walnut in log sales reported, were \$20.57, and for softwoods \$13.30 per thousand board feet. Stumpage or standing timber sales averaged \$2.48 for softwoods and \$5.37 for hardwoods.

Prices of standing timber and logs as in previous years, the summary indicates, are higher as they are nearer to districts of largest wood products consumption. While ponderosa pine, largely in virgin stands, was bringing an average of only \$2.81 per thousand feet in the far West, northern white pine which was largely second growth, was bringing \$4.57 in the Lake States and the Northeast. Similarly, the famous Douglas fir, largely in the virgin stands also brought \$1.77 while shortleaf pine brought an average of \$4.43 per thousand board feet of standing timber.

Cedars were the most expensive of the softwoods. Logs of Southern white cedar and eastern red cedar averaged about \$35 per thousand board feet. Port Orford cedar logs sold at nearly \$25, Alaska cedar at \$20, and western red cedar at better than \$16 per thousand board feet.

Other high-priced softwoods included cypress at \$18.29, western white pine at \$16.81, Norway spruce at \$16.12, and eastern spruce at only a few cents less.

Next to walnut, the highest priced hardwood was the common white-flowering dogwood, used for shuttles in the weaving industry because of its hardness and other special characteristics. Because of its general scarcity and slow growth, the price was \$34 per thousand for the 40 thousand board feet reported.

Other log prices were: locust \$29.62, basswood \$26.03, rock elm \$23.15; birch, ash and yellow poplar slightly more than \$25; hard maple \$24.83, butternut \$22.10, and white oak, cherry and hickory about \$21 per thousand board feet.

POSSIBLE UTILIZATION OF BARK OF DEAD CORK BARK FIR

Recently the Armstrong Cork Company of Lancaster, Pa. made inquiries regarding the bark from cork bark fir trees to be used for the production of cork composition. A few samples of the bark from dead trees were collected and furnished the company and it is their belief that if a sufficient quantity of this bark is available and can be collected at reasonable prices, then there is every possibility that during the present emergency it can be used instead of compositions produced from the Mediterranean oak bark. An effort is being made to secure some idea as to the amount of bark available on the Santa Fe and Carson Forests and as to the cost of collecting and delivering at central transportation points. In case it is found that the cost of collecting and transporting this product is not prohibitive, it may develop into an operation which will provide employment for local residents.

CORONADO RECEIVES REQUEST FOR LADY BIRD BEETLE

The Coronado has received an inquiry regarding the purchase of lady bird beetles which are to be used in extermination of the wooly aphid which are destroying water melon vines. From fifteen to fifty gallons of the beetles are wanted and the Coronado reports that they are rather numerous this year.

While there is a question as to what effect might result in the wholesale removal of these beetles on the build-up of other insects on which the beetles feed, the request is being granted without charge subject to such restrictions as are believed necessary.

OLD PHOTOGRAPHS SHOW RATE OF TREE GROWTH

Old photographs can be of value to botanists and foresters in studying the rate of new growth that heals up old scars left in the forest by fires long ago. An area burned over in 1862-63 to such an extent that in places the soil itself was burned away down to bedrock was photographed in 1872 by the pioneer photographer, William H. Jackson. His photographs show dead trees, bare and barkless, with grass growing among the trunks. The next series of photographs was taken in 1878. The grass was then being crowded out by a dense growth of mixed shrubs. For the decade 1898 to 1908 there are abundant photographic records which show the shrubs yielding place to the next stage in succession, an aspen forest. Maximum density of the aspen was reached in 1915. As early as 1900 new conifer growth was showing itself here and there and by 1920 the evergreens were beginning to overtop the aspens in many locations and beginning to assert dominance. By 1935 the evergreen percentage had risen to 65 and in 1940 dominance was complete.

These photographs have been studied by Mr. Ronald L. Ives of Ft. Worth, Kansas as a by-product of several geological field trips into the high country of Colorado, and he figures a replacement schedule as: maximum brush growth, 25 years; maximum aspen, 40 years; aspen largely eliminated, 65 years, and complete elimination of fire scar, 300 years or more. (Excerpts from Science Supplement)

OPTION RECEIVED FROM BREECE LUMBER CO.

Under date of July 18, an option was received from the George E. Breece Lumber Company on 3,013 acres of land on the Lincoln National Forest located within the Sacramento Mountain purchase unit as established and approved by the National Forest Reserve Commission on February 15, 1940. The tract is located within the Silver Springs Canyon and contains about one mile of permanent stream. The merchantable timber is reserved by the vendor and will be cut under Section 2-C of the State Forestry Law of 1939. This is the second Weeks Act purchase within this unit, 17,462 acres being acquired in the Orndorff and Barrough deal.

SALES OF TIMBER, 1941

Sales of timber from the National Forests in this Region for the fiscal year 1941 amounted to 40,558 M feet. Distributed as to States - Arizona, 24,765 M feet, New Mexico, 15,793 M feet. This was a reduction in total over the fiscal year 1940 when sales by States were as follows:

Arizona	16,343 M feet
New Mexico	<u>35,067</u> M feet
Total	51,410 M feet

The average stumpage rate for material converted to M feet during the 1941 fiscal year was \$2.32 per M feet, which was an increase over the previous year when the average price was \$2.27 per M feet.

FORESTS A PRODUCING FACTORY

A forest consists of the trees and the land on which they grow. The trees and land are a very efficient factory. This factory produces each year a crop of wood products. These wood products in their various forms are put to over 4,500 different uses. Thus the products of the forest may rightfully be called the materials of "universal use". A continuous flow of these products of universal use can only be maintained if the "factory" is kept in shape to function efficiently. The tree is a wood producing machine. It must be provided with raw materials - carbon dioxide from the air, water and nutrients from the land, and with the power from sunlight, the tree produces usable material. Reduce the raw material supply or the number of machines or impair their efficiency and the output is greatly reduced.

The greatest damage done to America's wood producing factory is through a type of cutting that either destroys all or practically all of the wood producing machines, the trees, or through fire that from time to time destroys the manufactured products of the wood factory. A proper type of harvest which removes the inefficient or worn out machines (old, overmature, diseased trees) and the retention of the efficient ones, healthy young trees, will increase the factory output. The old trees are the largest and the most valuable from a use, but not from a wood producing standpoint. Thus proper harvest will insure a continuous flow of essential material and continuous and high output from the wood producing factory. It is a case of eating part and saving part of the cake and always having more cake in the future.

WILDLIFE AND RANGE MANAGEMENT

MR. HATTON RETIRES

John H. Hatton, Assistant Chief of the Division of Wildlife Management in Washington, retired July 1, after 40 years of service. Well-known throughout the Forest Service organization, he began his career in western Nebraska in 1901 studying tree-growing possibilities there. His other service covered a period as general inspector during the early history of western National Forests, Assistant Regional Forester in Region 5 for 6 years, and for 19 years in a similar position at the Denver office, following which he was given his present assignment in the Washington office.

He was one of the charter members of the "Baked Apple Club" the name given to Thursday evening meetings of early foresters held at the Washington, D.C. home of Gifford Pinchot.

RANGE MANAGEMENT CHIEF VISITS RO

Walt L. Dutton, range management chief for the Forest Service, U. S. Department of Agriculture, visited the RO July 7, enroute to Flagstaff for the Arizona Wool Growers Association convention July 8-9. He left later in the day, accompanied by Jim Scott. Both were speakers at the convention.

MR. WOODHEAD ON DENVER DETAIL

Assistant Regional Forester Phillip V. Woodhead, in charge of Range Management, recently spent several months in Denver, Colorado, where he served as a member of a range policy committee of which Mr. E. A. Starch, Coordinator of the Northern Great Plains was Chairman. Other members of the Committee were John L. Lantow, John Corporal and William Allard of the SCS, Harry Steele of the BAE, George Weaver of the AAA and Mont H. Saunerson of the Forest Service. Two of the principal objectives of this committee were to point out the basis upon which an effective range management program should rest and to suggest modifications or new departures for a Department of Agriculture grazing policy. The range committee was one of three working on a departmental program under an over-all committee in Washington.

ANTELOPE HUNT ON COCONINO A BIG SUCCESS

Out of 400 licenses issued for the Anderson Mesa, Coconino National Forest antelope hunt during the latter part of September and the first part of October, 294 buck antelope were taken. The hunt was divided into two group periods of 200 hunters each. The first group killed 175 antelope, the second group killed 119 antelope. A ride after the hunt disclosed 7 antelope were crippled and lost. One antelope head measured 18-3/8 inches and is one of the first five in North American records. The State Game Department and sportsmen are all pleased with the hunt which was efficiently organized and managed.



RECREATION AND LANDS

JOHN H. SIEKER, NEW CHIEF OF RECREATION AND LANDS

The appointment of John H. Sieker to the position of Chief of the Division of Recreation and Lands was announced recently.

Mr. Sieker has been assistant chief of the division for nearly two years and acting chief since the death of Mr. Marshall in November, 1939. Mr. Sieker's work in the Forest Service has included ranger positions on the Washakie in Wyoming, Chippewa in Minnesota, Black Hills in South Dakota and junior forester and assistant supervisor of the Harney, South Dakota, and previous to his transfer to the Washington office he was supervisor of the Shoshone National Forest in Wyoming. He is a graduate of the Yale School of Forestry.

NATIONAL FORESTS DESCRIBED TO RAILWAY PASSENGER AGENTS

Recreation appeal of National Forests in the Southwest was attractively presented to approximately 125 passenger agents from all points of the Santa Fe Railway System at their Conference in Albuquerque on May 6, by Landis J. Arnold of the Division of Recreation.

Among the facts presented were that the 13 national forests of this Region had an estimated 1,400,000 visitors during 1940; that these forests are free to the public; that they bring substantial revenue to the states, cities, towns, communities, resorts, dude ranches, businesses and transportation agencies serving the forests; that these forests support by foundation and background, surroundings and outlets the majority of local tourist attractions and businesses; that "each of you and every other citizen of the United States owns 1-1/3 acres of National Forest land."

Arnold described the forest resources -- timber, forage, water, wildlife and recreation and briefly outlined how they are managed. He stressed that visitors can vacation on their own land in almost 20,000,000 acres of National Forest land in the Southwest; that they are always welcome to ask the forest ranger, that the forests are "natural art galleries without walls, zoos without cages"; that enjoyment may not be budgeted and that here "you can be Summer Sport or Winter Sport, Geologist, Botanist, Archaeologist, 'Bugologist or 'gist' Yourselves. Be Seven or Seventy."

His closing thought was that those who rely upon the national forests as a background for their enterprises, "can safely feel that, as long as the United States Forest Service exists, the national forests will be protected and maintained as a source of timber, forage and water and as a vocation land for visitors from all three-thirds of the Nation."

FAVORABLE MINERAL RULING

The decision of the Register of the Santa Fe Land Office has just been received in the George S. Spence case in the Jemez Division of the Santa Fe National Forest. The La Plata or Laughing Water claim, on which there is a hot springs, was protested by the Government on the ground, among others, of no mineral discovery. The Register holds with the Government. The case now goes to the Commissioner of the General Land Office in Washington for review.

MR. LARRY BRIGGS VISITS SOUTHWEST

Mr. Larry Briggs, of Amherst, Mass., Assistant Professor of Physical Education at Massachusetts State College, Vice President of the U. S. Eastern Amateur Ski Association and head of the National Junior Ski Committee of the National Ski Association made an inspection trip of winter sports areas, in Region-3 during July, as he toured the western states.

On July 7, with Frederick A. Baker of the Forest Service, U. S. Department of Agriculture, he visited La Madera winter sports areas in the Sandia Mountains. On July 8 he visited ski areas in the Santa Fe National Forest with Mr. Baker. Mr. Briggs then went on to Colorado, Utah, and circled south through Flagstaff to inspect the Arizona Snow Bowl on the Coconino National Forest, enroute to California.

He praised the Forest Service ski areas in the Sandia Mountains and congratulated Albuquerqueans on having areas so close to home. He said, "We have one or two ski areas in Massachusetts that compare with yours in the Sandias, but most of them are a considerable distance from communities. The only exception is one five miles from Pittsfield, Mass. We who live in Amherst must drive fifty miles to that area."

BIG CAMP MEETING ON LINCOLN

Supervisor Moore and Ranger Gordon Gray of the Lincoln National Forest called at the regional office on August 4. Ranger Gray reported that approximately 2,000 men, women and children from west Texas and southeastern New Mexico were on his district (White Mountains) from July 30 through Sunday August 3, attending the second annual interdenominational Ranchmen's Camp Meeting. They occupied a special use area. Leaders of the meeting informed forest officers that this year again they would have a group remain to spend several days cleaning up the area. (It is refreshing to discover there are still some people on earth who believe that "cleanliness is next to Godliness").

Those who traveled some distance brought bed rolls and camped on the area. Many of the ranchmen are forest permittees, and the Lincoln kept a representative on hand for cooperation and contact.

It is understood that this organization is patterned after a similar one which has operated in Texas for a number of years.

CHIEF OF RECREATION AND LANDS COMPLETES VISIT TO R-3

Mr. John Sieker spent two weeks in Region Three during July visiting the Coconino, Prescott, Kaibab, Cibola, Santa Fe and Carson National Forests. He was accompanied by members of Recreation and Lands of the Regional Office. and Regional Forester Pooler accompanied the party on the Santa Fe and Carson. Assistant Regional Forester Hilton, Chief of Recreation and Lands, R-2, spent two days with the party on the Santa Fe and Carson. Following the trip in Region 3, Mr. Sieker accompanied Mr. Hilton to Region 2. Messrs. Miller and Arnold visited the Rio Grande; San Juan and Montezuma Forests in R-2 before returning home.

INFORMATION AND EDUCATION

ARIZONA STATE TEACHERS COLLEGE SUMMER SESSION

The Arizona State Teachers College at Tempe, in its summer session, conducted a course in "Arizona Resources." The Forest Service was requested to help in this course by giving talks about forest land resources. Participation included three talks by Dr. McGinnies of the Southwestern Forest and Range Experiment Station, Tucson; two talks by Quincy Randles of the Regional Office; and four talks by members of the Tonto office, including two by Palmer. Practically all of the students were teachers from various parts of the state, who were taking summer work in order to keep their teaching certificates alive. For these reasons we felt that this was more than assisting the College; - it was an opportunity to convey some very essential factual information to people who are in a position to disseminate it to others. Seven of the students accepted an invitation and were conducted on a field informational trip Sunday, June 29. (TONTO BULLETIN)

SHOW-ME TRIP FOR BOY SCOUTS

On July 9 Ranger Smith of the Cibola National Forest and Mr. Buhler of I&E, Regional Office, accompanied 27 boy scouts through the Sandia district of the Cibola National Forest. The trip included the Cedro Peak fire lookout, recreational areas, timber plantings, Christmas tree cutting area, and a typical forest community. This trip was in connection with the training course sponsored by the Forest Service for Boy Scouts to give them a lasting impression on how a national forest is managed to produce a permanent crop of timber, forage, water and wildlife and how these stimulate employment. The course given to Boy Scouts of Albuquerque was well received, is simple, and can be adapted to any national forest.

FOREST SERVICE PROGRAMS POPULAR AT NATIONAL SCOUT CAMP

At request of officials in charge of Philturn Rockymountain Scout-camp, the national encampment operated near Cimarron, New Mexico by the Boy Scouts of America for older Scouts, Chief Forest Ranger George Russell and his showboat remained an additional week to show Forest Service films. Russell completed a schedule from August 6 to 13 and remained until August 20. Among his presentations was the vocafilm entitled "Our Forests - Rule or Ruin?"

Another I&E representative, Ernest O. Buhler, has completed a series of evening talks to the Scouts there, on National Forest resources and other values. Philturn is a focal point in the summer for Scout troops from all over the United States.

RECREATION ARTICLE IN NEW MEXICO MAGAZINE

"High Country Holiday" is the intriguing title of an article by Irene A. Jones of I&E, published in the August issue of NEW MEXICO Magazine. In interesting style, the article describes a trip through the Jemez Mountains on the Santa Fe National Forest. Forest Service camp-ground facilities, fishing, timber, wild flowers and other attractions of the Jemez country are described.

FUTURE FARMERS CONVENTION

At the New Mexico State Convention of the Future Farmers of America on the evening of July 31, on the conference grounds in the Cibola National Forest, the Forest Service program was presented by Fred McCament and Ernest Buhler of I&E. Two talks by Buhler, between films shown by McCament, brought out how National Forests help to improve farmer's home markets, supply forage for livestock and influence the delivery of usable water for growing crops. He described resources of the Cibola National Forest. The vocafilm entitled "Our Forests - Rule or Ruin?" and two movies, "Blessings of Grass" and "4,000 Gifts of the Forest", were run. The program was enthusiastically received.

FOREST PROGRAM AROUSES INTEREST AT LAS VEGAS

Unusual interest in the forest program was evidenced by college students, professors and sportsmen at Las Vegas, New Mexico as the result of two programs put on there during July by Fred McCament of I&E.

On July 24 at an assembly at Highlands University, attended by approximately 520 persons, McCament presented the Vocafilem entitled "Our Forests - Rule or Ruin?" explaining the forest program. He also ran two motion pictures, "Vanishing Herds" and "4,000 Gifts of the Forest." Intense interest was shown by all. A number of the professors discussed the forest program with the I&E representative after the showing.

On July 25 the Vocafilem and the motion pictures were presented to the Game Protective Association at Las Vegas, with about 40 adults present. Here the forest program was also discussed by Raymond Stamm, Secretary of the New Mexico G.P.A. He explained how it could benefit sportsmen, among others. Questions were answered by Stamm and McCament. Interest was keen.

PRESIDENT OF PARAMOUNT WRITES REGARDING PLANS FOR FOREST RANGER MOVIE

Barney Balaban, President of Paramount Pictures, Inc., writes as follows:

"Paramount is planning an important Technicolor feature motion picture production with the background of the Forest Rangers which we believe will, when completed and released, reflect great credit on your Forest Rangers and the Service in general. The story upon which this picture will be based was written by Miss Thelma Strabel and will be published shortly by Cosmopolitan Magazine as a novelette. (September issue; title - "Of Fire By Night.") Miss Strabel has written several other stories of high quality, including REAP THE WILD WIND, presently being filmed by Cecil B. DeMille at the Paramount Hollywood Studio.

"Mr. David P. Godwin of your Service is very familiar with our story FOREST RANGER and in fact gave very fine cooperation in supplying factual and background material to Miss Strabel when she was planning and writing it.

"It is our intention to call our picture THE FOREST RANGERS. Its cast will probably include some of our top stars such as Madeleine Carroll, Fred MacMurray, Paulette Goddard and Robert Preston..."

"We will probably wish to start background photography for THE FOREST RANGERS within the next few weeks... It is our hope and intention to carry to the public a genuine measure of the splendid quality of both the men and the motive which dominates your Service." (WO INFORMATION DIGEST 7/9/41)

VANCE THOMAS MEMORIAL AWARD

Ranger Gordon Gray made his annual award of the "Vance Thomas Memorial" at the Ruidoso School the evening of May 21, 1941. Miss Relda Cooper, 8th Grader, of the Stetson School prepared the best essay of "Fire Prevention" and the silver cup will remain at the Stetson School for the next year and Miss Cooper was presented with an American flag.

Mr. Gray made a short but very appropriate talk to 136 persons attending the joint closing exercises of the Stetson and Ruidoso schools. This contest was started three years ago by Ranger Gray and the silver cup and individual prizes have been furnished by him. All students in all the schools on the White Mountain District may compete in this contest and a number of the papers were so good that it was difficult to choose the best one. This is presenting "Fire Prevention" to a great many children each year at a very impressive age and much interest is taken in the contest by students, teachers and parents. We "Doff our Derby's" to you, Ranger Gray!

NEW APACHE FOLDER

A new forest folder for the Apache National Forest has just been received from the Washington printing office. The booklet contains 22 pages, with 20 photographs and a map of the forest in red and black showing the forest boundaries, roads, supervisor's and rangers' headquarters, guard cabins, fire lookout stations, forest campgrounds, etc. Any one wishing copies may secure them from the Regional Office or by writing to the Forest Supervisor, Apache National Forest.

SHOWBOAT ENCOUNTERS STORMY GOING

"Skipper" George Russell of the Showboat docked at the Regional Office loading platform August 5 and reported a profitable trip over the Coconino -- even despite a bit of stormy weather. He reported that Ranger Harold Pilmer led the Coconino staff in getting out groups, arousing interest, and in the number of places where showboat programs were presented on his district. Commendation is also due to L. S. Karchner, timber sales man at the Saginaw logging camp, who refused to acknowledge defeat when rains spoiled plans for an outdoor showing. Karchner located an old garage which accommodated part of the audience, while others kept dry by sitting in automobiles parked in front of the open doors. Russell projected his films from the truck outside, to a screen on an inside wall of the garage. He said "We were repaid for the extra effort, by genuine interest and appreciation from the logging workers and their families."

TALES OF THE TRAIL

"Tales of the Trail" is the title of a new radio program which is being presented over Station KOA (Denver) of the National Broadcasting Company, each Thursday evening at 9:45. The program started July 10.

Len Shoemaker, for nearly thirty years a ranger on the Holy Cross and Roosevelt National Forests, will tell the experiences of an old-time ranger. He and his companion rangers in the early days, almost single-handed, fought forest fires, built forest trails and telephone lines, and helped to develop the present day National Forest system.

Stories of famous old characters in Colorado's history, jingles of the wildwood composed over the years by Mr. Shoemaker, are interspersed with firsthand accounts of how the forest ranger fights fires and protects and administers Uncle Sam's National Forests. (News Bulletin, U.S.D.A., Forest Service, Denver, Colo.)

C. C. C.

MAJOR JOHN D. GUTHRIE VISITS REGION

Major John D. Guthrie, CCC Inspector, Washington Office, arrived in Albuquerque June 13. After spending a few days in the Regional Office he left for northern New Mexico and later visited other parts of the Region. In addition to inspection of CCC camps and their work, the Major contacted a number of his old friends, both in and out of the Service.

Prior to the first World War he served as Supervisor of the Apache and Coconino Forests and upon his return from the Army was Supervisor of the Carson until he was transferred to Region Six.

The Major's many friends in the Region were glad to have an opportunity to reminisce on the early days of Region Three.

SAFETY-CCC

Safety records for May merit honorable mention with 13 camps reporting neither minor nor lost-time accidents. The other six camps had totals of 11 minor and 4 lost-time.

Lost time resulted from hernia while carrying poles, glancing axe cut on calf of leg, particle of metal falling in eye while working under truck (should have used goggles) and injury to enrollee's leg when his foot slipped off culvert on which he was standing (questionable practice). Minor accidents resulted from slipping bars, glancing picks and bruised fingers while handling rock.

There were 5 motor vehicle accidents during the month, all enrollee driven. Estimated damage to CCC equipment \$18; estimated damage to private property \$75.58.

FOREST SERVICE "SS" TRAINING

The June 21 issue of HAPPY DAYS carried an article regarding the standard specification plan for CCC enrollee training in camps of the U. S. Forest Service and states that after six months of experimental use, the plan has been adopted as the basic job-training procedure in all camps operated by the Forest Service. This plan was developed by a committee in Washington last August, of which J. T. Bonner, Educational Advisor of this office, was a member.

MAY BE NO FURTHER CUT IN CCC CAMPS HERE

Indications that there will be no further reduction in the number of CCC camps in R-3 were seen in a circular letter recently received in the Regional Office from the Eighth Corps Area headquarters. The circular lists several changes in the revised Seventeenth Period Program, but none of these latest changes affect the Forest Service. The circular goes on to state, "For your information, the recent camp reduction program designed to reduce the total number of CCC camps from 1,236 to 1,100 provides no further cancellation of camps in this Corps Area"

CCC PROJECT SUPERINTENDENTS MEET

September 10, 11 and 12, 1941, may go down as red letter dates in Southwestern CCC history, since on those dates Camp F-54 on the Lincoln played host to the first planned training meeting of Project Superintendents and staff men to be held in the Region. With Ted Bonner, Regional Training Officer (CCC), presiding, the gavel, (if there had been one) fell promptly at 7:30 a.m. on the 10th, and a roll call would have shown 100% attendance.

In addition to the Project Superintendents and staff men, those in attendance included Ted Bonner, E. P. Ancona, Alva A. Simpson, R. L. Hughes and Charley Kerswill, all of the Regional Office, and Supervisor Moore of the Lincoln, and Mr. Fred Stell of the Washington Office, CCC Motor Division.

Having been given advance notice of their assigned subjects, each superintendent and staff man read and presented a paper clearly indicating that considerable work and study had gone into its preparation. Each subject was thoroughly discussed in open meeting, resulting in the clarification of many doubtful points. Current enrollee Training Plan Specifications were reviewed by the various committees and changes recommended that, if adopted, will bring them more into line with conditions and circumstances faced in this Region.

Safety on the job was one of the main topics of discussion. CCC Safety Regulations were reviewed at length and certain requirements clarified and given a common interpretation. A very interesting feature of this discussion was the various methods employed by the superintendents to catch and hold the interest of the enrollees in this important phase of training. Fire training and details of camp fire organization were discussed and notes compared.

Alva Simpson, head of the new Division of Personnel Management, gave a clear and concise interpretation of the Ramspeck Act as it affects CCC Technical personnel. Touching upon the delicate subject of efficiency ratings and using common, every-day language, Mr. Simpson swept aside the mysterious haze that has seemed to enshroud this important phase of personnel management and brought to light the methods employed to arrive at a fair and impartial grading of the employee's ability and performance.

In the discussion centering around the maintenance of motor equipment, the meeting was fortunate in having present Mr. Hughes and Mr. Kerswill of the Regional Office, and Mr. Fred Stell of the Washington Office. Messrs. Hughes and Kerswill explained the functioning of the Central Repair Shop, and stressed the importance of preventative maintenance. Mr. Stell supplied some rather startling figures regarding the values tied up in motor equipment assigned to CCC Camps, and the annual cost of operation and maintenance. The high light on this topic was reached when Mr. Stell, assisted by Mr. Kerswill, gave a practical demonstration in truck inspection. Using a truck selected at random from among those assigned to work projects, Mr. Stell went through the technique of inspection with clock-like precision, pausing only briefly to explain cause and effect.

No detail of camp operation was overlooked in the general discussion. Notes were compared and it is believed much good will result from this first meeting, and it is hoped that it can be made an annual affair.

SOUTHWESTERN FOREST & RANGE EXPERIMENT STATION

NEW HEADQUARTERS

The Southwestern Forest and Range Experiment Station has moved its official headquarters from 701 East Third Street, where it has been located in a rented building the past 3 years, to its new headquarters on Tumamoc Hill located just west of the city limits of Tucson and which property and site were donated last year by the Carnegie Institution of Washington and accepted by the Secretary of Agriculture as the headquarters and an experimental area of the Southwestern Station. The appraised value of the buildings and land thus acquired is about \$30,000. Within the area are 245 acres of deeded land and 640 acres of State lease land, the entire area having been enclosed by fence and rigidly protected by the Carnegie Institution since 1902. It represents probably the best remnant of virgin semidesert and desert vegetation in the Southwest.

SAM N. BROADBENT VISITS SOUTHWESTERN

Sam N. Broadbent, for many years a member of the Forest Service and for the last 2 years holding a responsible position in the Bureau of the Budget, visited the Southwest late in June for the purpose of considering upon the ground the need for additional headquarters buildings for the Southwestern Station and for a new Supervisor's Office for the Kaibab National Forest at Williams.

THE SECOND CROP ON CONSERVATIVELY CUT AND HEAVILY CUT PONDEROSA PINE LANDS

Substantial bodies of ponderosa pine in the Fort Valley Experimental Forest are now or will soon be entering the second cutting cycle. In addition to several areas logged by the Forest Service under the group selection method from 15 to 30 years ago, there are some 1,200 acres of private cuttings, or logger's selection, dating back to the early '90's.

Two areas on similar sites furnish some interesting contrasts. One is the Wing Mountain Sample Plot of 480 acres, cut under the group selection method in 1909 and again under modified methods of selection in 1939; the other is an area near Fort Valley, heavily cut about 1894 and now being cut a second time under a selection method.

After 30 years a second cut on the group selection area removed 2,600 board feet net per acre or slightly more than the increment during the period, and left 3,000 board feet per acre made up almost entirely of trees in the blackjack or intermediate age classes; the logger's selection, nearly 50 years after the original cutting, is yielding about 1,000 board feet per acre in the present cut, which will leave perhaps 1,500 board feet. (Exact figures are available for the Wing Mountain plot which has been measured periodically, but measurements have not been made on the Fort Valley area.)

Defect in the second cut on the Wing Mountain area was 11 percent; in the logging now in progress on the Fort Valley area it will probably run as high as 40 percent, because many of the largest trees rejected in the first logging are now complete culls.

Yield estimates indicate that the Wing Mountain area will furnish 2,500 to 3,000 feet per acre 30 and 60 years hence; the Fort Valley area, because of a lighter growing stock, cannot be expected to yield more than half that much.

Lighter present and future cuts on the Fort Valley area are partially offset by a heavier initial cut, particularly in the better grades, because it removed the cream of the timber. Estimates of total yield, including the first cut and assuming equal volumes in the original stands, indicate that during 90 years 14,000 board feet will have been removed from the Wing Mountain area as compared with about 9,000 from the Fort Valley area. Higher grades in the first cut on the Fort Valley area will be offset by higher grades in subsequent cuts on the Wing Mountain Area.

Both areas have restocked almost completely since the first cutting, and the young stands on both areas are being improved by pruning and removal of worthless trees. The proportion in the latter class is high on the Fort Valley area because the seedlings which started during the first two decades were sparsely distributed and because they were in a pasture which prior to 1910 was subjected to extremely heavy use by cattle. Porcupine damage was severe on both areas up to 1930.

On both of these tracts the primary object in the immediate future should be to develop an effective growing stock in the younger age classes. About 60 years hence the original stand will have been removed from both areas and the stands thenceforth should be more comparable as to degree of stocking and distribution of age classes.

LESSONS FROM A SECOND CUTTING OF PONDEROSA PINE

(By G. A. Pearson, Senior Silviculturist)

The old saying that hindsight is better than foresight applies to timber marking as well as to human affairs. In marking timber for a second cut on areas originally cut under Forest Service marking rules, one can point out many examples of what should have been done and what should not have been done. Since I took part in the first marking of some of the areas now being logged a second time, and even had a hand in formulating the early R-3 marking rules, I feel privileged to speak.

During the past 3 years, two areas in the Fort Valley Experimental Forest have been logged a second time and a third has been marked for cutting this fall. Two of these areas were originally Forest Service group selection cuttings and one was "logger's selection" of the early nineties. The stands today are not so different as one might think. The Forest Service cuttings left more trees of the yellow pine and large blackjack classes, and consequently increment has been much higher. The logger's selection left yellow pines too, but they were mostly of the defective type which have died or blown down during the 50 years elapsed since cutting. In the treatment of blackjack groups, the lumberjacks 50 years ago really practised better silviculture than present-day foresters, because they took out many of the largest blackjacks and intermediates which were dominating groups of small blackjacks and poles, with the result that the trees remaining in these groups have made astonishing growth. Except in a few places of extremely heavy cutting, reproduction on the logger's selection area has been excellent; this is true also of the Forest Service cuttings but, being more recent, they have not afforded the same opportunity for development of the young generation.

The area which I am going to discuss in particular is a 90-acre block logged under the group selection method in 1925. It had been fenced in 1913, and 1914 seedlings were as thick as the proverbial hair on a dog's back. Marking followed the usual practice of taking all yellow pines except a few seed trees and leaving blackjack groups practically undisturbed. Reproduction of both 1914 and 1919 classes underneath and close around the large tree groups had already been killed out except for occasional seedlings, and consequently rather large areas from which yellow pines were cut were left poorly stocked. During the 16 years which have passed since cutting, practically no seedlings have started in these spots, but this is not a serious matter because the 1914 class stands like a living wall all around the open spaces and will eventually send its roots across them. A more important point is that the scattered yellow pines left in cutting have utilized only about one-fourth of the soil, whereas neighboring blackjack groups have been overstocked.

These blackjack groups are an interesting study, in the light of information gained from growth records on other cut-over areas. (Growth has not been measured on this area.) The proportion of large, "wolfy" blackjack and intermediates dominating blackjack groups is unusually high. Many of them are well up toward 30 inches d.b.h. and a few are over 40 inches. I try to visualize these blackjack groups as they would appear today if the rough dominants had been removed in the first logging, and I see vigorous, relatively clean-boled trees around a stump instead of the narrow-crowned subordinates languishing under a lusty wolf tree. Growth records on cut-over sample plots leave no doubt about the capacity of physiologically sound Class C trees to respond to liberation. Distinction should be made between C trees which are in that class as a result of crowding and C trees which are declining because of disease or injury. Even Class D trees respond, but before they can make effective growth, they must build up a crown. A primary responsibility of the timber marker is to prevent good Class C trees from falling into the D class.

In saying that limby, low-grade dominants should be taken out in the first cutting, I am not unmindful of the economists' value curves. I have before me curves which rise with increasing diameter from a minus value to a positive value as the diameter approaches 40 inches. But in trees whose first two logs fall in grades 4, 5 and 6 the curve either remains below the zero line or barely strungles over at 40 inches d.b.h. According to my mortality curves the chances are more than even that a tree which has passed 30 inches d.b.h. will not live to see 40.

But the conversion value of the individual tree is only one of several considerations. The marker must also ask himself "what will this tree do to its neighbors if allowed to stand?" Obviously, a Class A tree will add more volume than a Class C tree which it dominates; but that is not the point. The question which should be asked in marking either blackjack or yellow pine groups is: Will a large dominant yield more increment than several small subordinates occupying the same space, if the dominant is out? My growth records say "No," and the economists' value curves tell me that a single re-leased Class C tree, if it has a relatively clean bole and is physiologically sound, may be expected to put on more value increment than the larger Class A tree, which in the Southwest is almost invariably rough.

For illustration let's assume that the Class A tree is 24 inches d.b.h. and that the space it occupies is shared by three subordinate Class C trees 12 to 16 inches d.b.h. In 30 years the Class A tree may add

about 300 board feet to its volume; the three Class C trees during the same period will add 400 board feet if the dominating Class A tree is cut. Value increment will increase this margin because it is assumed that the Class C trees are of good sawtimber form. From the standpoint of mortality, the Class A tree is a greater risk than the three subordinates. Even if it grows 6 inches in diameter in 30 years it may still be in the sub-marginal class. In the meantime it will have suppressed at least one of the three Class C trees, to say nothing of poles, and the remaining Class C trees may have passed into the D class. The answer to the problem of inferior dominants is get rid of them at the first opportunity. If they will not pay their way to market, poison them.

Blackjack groups furnish the best opportunity to practise timber management in the Southwest. Yellow pine groups, if opened up properly, may contribute substantially to the net increment, but their primary function is to bolster up the second and third cuts. Average cut-over stands do well if they yield a net annual increment of 2-1/2 percent on the original volume; blackjacks 12 to 16 inches d.b.h. are capable of yielding 8 percent. Stands cannot remain perpetually young, but young age classes should contribute a much larger proportion of the growing stock than is now the case. And they can be made to yield quality sawlogs if managed with that object in view. Blackjack groups have a prior right to attention in the first cut but if they have been neglected in the first cut, the next best opportunity is in the second cut.

PIONEER'S PAGE

MRS. CHENEY DIES AFTER LONG ILLNESS

Mrs. Morton M. Cheney, wife of Associate Regional Forester Cheney, died at her home in Albuquerque on July 12. Her death is felt keenly by all.

Mrs. Cheney had been ill for five years. She passed away peacefully in a coma, while the family was at her bedside.

Born in Warner, New Hampshire, Mrs. Cheney had lived in New Mexico 28 years, all of that time at Albuquerque. As a poet she was gaining national recognition, and her death took not only a devoted mother but a brilliant mind.

The immediate survivors are Mr. Cheney; four daughters -- Mrs. Eloise Doty of Roswell, Mrs. Helen Beasley of Albuquerque, Mrs. Janet Masters of Lordsburg and Ruth Elizabeth Cheney of Albuquerque; to grandchildren in the Doty family, and a brother, Everett B. Lackie of Baltimore, Md.

FOREST SUPERVISOR GRUBB LEAVES CROOK

Francis L. W. Grubb, Supervisor of the Crook National Forest, went on leave on August 16 pending his retirement on November 30. Mr. Grubb was born in Colorado and entered the Service as Forest Guard on the San Juan National Forest on April 1, 1911. The following month he was promoted to Assistant Forest Ranger and on March 1, 1915, was promoted to Forest Ranger and transferred to the Durango National Forest. On September 1, 1915, Mr. Grubb was transferred to the Datil National Forest in Region 3 and on November 1, 1916 was transferred to the Gila. On April 1, 1918 he was promoted to Deputy Forest Supervisor and assigned to the Tusayan, was transferred to the Coronado on April 1, 1920 and on May 1, 1924 he was promoted to Forest Supervisor in charge of the Datil National Forest. In 1926 he was transferred to the Prescott, remaining there until May 16, 1935 when he was placed in charge of the Crook.

It is understood that Mr. Grubb has disposed of his residential property in Safford and is now on the west coast. Next summer he plans to visit the Northwest and British Columbia before deciding upon a place to make his home.

William H. Woods, Jr. has been designated as Acting Forest Supervisor of the Crook pending the appointment of Mr. Grubb's successor.

ASSISTANT SUPERVISOR ROWLEY LEAVES CROOK

Raymond D. Rowley, Assistant Forest Supervisor of the Crook National Forest, went on annual leave September 26 and will retire December 31. "Doc" Rowley, as he is known to his many friends both in and out of the Service, was born in Shellrock, Iowa, and entered the Forest Service on April 20, 1918 as Forest Ranger on the Sitgreaves National Forest and transferred to the Crook in 1922, serving as Senior and Principal Forest Ranger until 1935 when he was promoted to Assistant Forest Supervisor.

It is understood that Mr. Rowley expects to do some vacation traveling next year and will then continue his residence in Safford.

ROBERT F. RHINEHART PASSES AWAY

A timber man died on July 8 in the timber center of Arizona, Flagstaff. "Rhiney" Rhinehart, retired Chief Forest Ranger, passed away in a hospital there. He had been ill for some time. Born in Alabama on July 14, 1875, Robert F. Rhinehart entered the Forest Service as a forest guard on the old Datil Forest on April 10, 1908. In 1914 "Rhiney" served a short time on the Carson and from there went to the Coconino where he remained until his retirement in August, 1937. During his time in the Service he held the positions of forest ranger, scaler, lumberman, senior lumberman, principal lumberman and chief forest ranger. From 1916 all of his work was in connection with timber operations. During 1921, 1922, 1923 and 1936 he was loaned to the State of Arizona for several months to carry out reconnaissance land classification work and the handling of sale administration under the State of Arizona cooperative agreement.

After retiring, "Rhiney" spent the summers in the Flagstaff area where he worked for so many years. He spent the winters at El Paso or with his mother in the South. Burial was at Leakesville, Mississippi on Saturday, July 12.

"Rhiney" was a capable, industrious and loyal forest officer. He will be missed by a multitude of friends both within and out of the Service.

FORMER R-3 MAN DIES IN ACCIDENT

Friends in the Regional Office have received word that Kimberlin Carlisle, who was timber sale man on the Coconino and Sitgreaves before resigning in 1935, was fatally injured in an automobile accident near Featherfalls, California, on August 2.

Mr. Carlisle was 42 years old. He was born in Otero County, New Mexico and grew up in the Sacramento Mountains. He is survived by his parents, the Reverend and Mrs. A. R. Carlisle, who live near Hot Springs, New Mexico, and his wife and three daughters, who live in Flagstaff, Arizona.

RANGER AUMAN RETIRES

Wilson E. ("Shorty") Auman, district ranger on the Crown King district of the Prescott, received disability retirement August 31.

Auman was wounded in action during service overseas in the last World War. He entered the Forest Service on March 15, 1923 as Forest Ranger on the Coronado. Going to the old Tusayan in July of that year, he engaged in timber sale work and then took a ranger district. He remained on that forest through the time it became the Kaibab, for 16 years. On September 1, 1939, he transferred to the Prescott as district forest ranger.

As "Shorty" Auman steps out of the harness he takes with him the wishes of his many friends for improved health and enjoyable rest.

OLD TIME TRAPPER PASSES AWAY

The death of "Nat Straw" the last of the old-time trappers who covered the inaccessible country on the headwaters of the Gila River, occurred on June 22. He made his home on the William Furr Ranch on the Gila River. Many of the older members of the Service knew him for a long period of years and will regret to learn of his death.

MISCELLANEOUS

MEETING OF SOUTHWESTERN SECTION OF SOCIETY OF AMERICAN FORESTERS

The third annual field meeting of the Southwestern Section of the Society of American Foresters and first joint meeting with the Central Rocky Mountain Section was held at El Rancho Hotel, Gallup, New Mexico, October 1 to 4.

The first day was spent at the Ft. Defiance mill and cutting area of the Navajo Reservation in inspection and discussion, with a Navajo barbecue lunch of mutton, beans, fried bread, jam and coffee. An enjoyable banquet was held that evening, with short talks by Professor Wagar and Dean Dean of the Forestry Department of Colorado State College, Mr. Pearson of the Southwestern Forest and Range Experiment Station, Mr. Connaughton, Director of the Rocky Mountain Forest and Range Experiment Station, Mr. A. A. Brown of the Regional Office at Denver, with Regional Forester Peck, a Society Councilman, as principal speaker. Mr. Clepper, National Executive Secretary, was also present and was introduced to the meeting at the banquet.

Due to heavy rain, the second day's activities were limited to a visit to the Navajo Sheep Experiment Station at Ft. Wingate and a talk by Dr. Hubbel on the activities of the Mexican Springs Experiment Station of the SCS.

Attendance from the Indian Service dominated the meeting, being led by Chairman Bixby and Secretary-Treasurer Herron, the SCS being represented by Joe Libby, Jackson Space, John Bradshaw and McCracken. Members present from the Central Rocky Mountain Section were mentioned in the speakers' list. Supervisor Leland De Heywood of the La Sal National Forest of Region Four and the Intermountain Section, S.A.F. was present and had the distinction of being the only Supervisor present. Mr. Pearson and Frank Wadsworth from the Southwestern Forest and Range Experiment Station were present as were Rex King, Alva Simpson, Llew Putsch and Roger Morris from the Regional Office of R-3.

ERLE HARDY LEAVES ALBUQUERQUE

After about seven years of fruitful and cordial working relations with Mr. Erle L. Hardy, meteorologist in charge of the U. S. Weather Bureau branch at Albuquerque, Region 3 of the Forest Service learned with regret of his departure on September 1 for Ft. Worth, Texas. He becomes Regional Director for the Fourth Region of the Weather Bureau, covering New Mexico, Oklahoma, Texas, Arkansas and Louisiana.

Mr. Hardy's successor is Mr. D. C. Cameron, who has been in the Chicago, Salt Lake City, and Portland, Oregon offices of the Weather Bureau, and now comes to Albuquerque from Washington, D. C.

"BUD" MCLOHON APPOINTED CHIEF OF RM, GRAZING SERVICE

The appointment of Albin D. Molohon as Chief of the Branch of Range Management for the Grazing Service has been announced by the Department of the Interior. Mr. Molohon succeeds Mr. E. N. Kavanagh, whose appointment as Director of Soil Conservation for the Interior Department has been announced. Both Mr. Molohon and Mr. Kavanagh were once members of the R-3 organization of the Forest Service.

TWENTY YEARS AGO

A Few Facts Peculiar to Taos, the Headquarters of the Carson
It is the third oldest city in the U. S.
Has two of the oldest churches in America.

The home of the first newspaper published west of the Missouri River,
"El Crepusculo". If you have a copy it is worth \$500.

The residence of the first civilian governor of New Mexico under
American rule, Governor Bent.

The Governor was also assassinated here.

The native place of Jose Gonzales, the only full blooded Pueblo
Indian ever to become Governor of New Mexico - by force of arms and con-
spiracy.

More artists to the square inch than anywhere else in U. S. to the
square yard.

The stamping grounds for twenty years of Long John Dunn who main-
tains he is the only living soul who can bring the travelers from the rail-
road to ancient Taos without forcing them to push or walk." (L.P.M. in
Carson Pine Cone)

Note: Long John is still one of the Taos characters that tourists
like to meet.

RADIO-WAVE SPRINKLER TO AID FIRE FIGHTERS

According to a news release by the U. S. Department of Agriculture,
a new device known as the "radio-wave sprinkler" has been developed by the
Forest Service and will facilitate emergency communication in the forests.
It is known technically as an automatic relay station in that it picks up
radio waves from one point and transmits them to another. The small six-
pound portable radio developed for parachute firefighters last spring is
dependable only for a few miles although it may sometimes carry for dis-
tances up to a hundred miles or more.

When the small portable radios carried by Forest Officers on fire
patrol can not send their waves over the mountain they contact the sprink-
ler which automatically turns on its transmitter and re-broadcasts with
a powerful wave to the base station. Attendants need visit the relay
station only at infrequent intervals. It will enable the Forest Service
to make dependable use of ultra high frequencies and thus reduce the need
for use of other frequencies valuable for national defense purposes.

Searching parties hunting lost persons have often been unable to
keep track of each other by present radio devices. By means of the radio
sprinkler, one party will be able to communicate with another directly
under practically all conditions and thus may not only save time but
often may save human lives.

NEW USE FOR SAWDUST

A new and unique use of sawdust, which all too frequently is a
waste product, has been reported by Dr. Wilbur Stout, State Geologist of
Ohio, according to the Forest Research Bi-Monthly Report of April, 1, 1941.

The report states "In the ceramic industry of Ohio, the manufacture
of fire and insulating brick comprises an important division. In Vinton
County, Ohio an unusually valuable type of clay for making refractory
brick occurs. Experimentally, brick makers mixed ordinary sawdust with
this clay prior to making insulating bricks. In firing, the sawdust, of
course, burned up. The result is a highly porous brick filled with numer-
ous tiny cavities. Use of this clay sawdust brick has reduced the time
necessary to heat up insulated ovens to about a fourth the time formerly
required; and once heated, further marked economies have appeared in
maintaining the ovens at the required temperature....

ANNUAL FREE USE REPORT

The annual free use reports from the forests for the fiscal year 1941, have been tabulated and the data sent to the Chief. Amount of free use totaled over 36,000 M feet, which went to over 18,000 users. Arizona was represented by 6,767 M feet to over 5,000 users; New Mexico by 29,850 M feet going to nearly 13,000 users. The Carson in New Mexico, with over 13,000 M feet, granted the largest amount, followed by the Santa Fe with 6,959 M feet and the Cibola with over 4,000 M feet. In Arizona, the Coronado was high with over a million and one-half, followed by the Prescott and Coconino in the order named, each of which granted over one million feet. Over 7,000 Christmas trees were issued under free use during the fiscal year.

The volume of material issued during the 1941 fiscal year was lower in the total than in the F.Y. 1940 when the amount was 37,650 M Feet. The reduction was in Arizona which was made up in part in New Mexico where the total this year exceeded that of last year.

TONTO TRIES STEEL AND CONCRETE CATTLE GUARD

Due to the increased cost of steel and the difficulty in obtaining same, the State Highway Department has developed what they call the "Precast" type of cattle guard, which consists of reinforcing steel and cement and is from 40 to 50% cheaper than the steel grid type. These have proved very satisfactory, the State having already installed this type in a couple of cases on State Highway jobs, and, as reported by the State Highway Department, they are really taking the traffic. We are, therefore, trying this type of cattle guard out on the Apache Trail where the Clemans-Barkley allotment boundary fence crosses the Trail. This is being done in cooperation with the State, the Forest Service furnishing the material and the State furnishing the labor and actually installing the cattle guard.

(Tonto Bulletin)

ARIZONA PACKING INDUSTRY

In order to get some idea of the relationship of the meat packing industry in the Salt River Valley to the economic welfare of the State, here are some facts that are worth thinking over:

Approximately 75,000 cattle are butchered and processed through packing plants in Phoenix and vicinity. 75% of these are Arizona grown stock.

This industry furnishes employment to 4,500 people, including those working on the farms, in feed lots, and at packing plants.

The largest outfit here is the Tovrea Packing Company which, incidentally, has the largest individually owned and operated feed yards in the world. It handles as many as 26,000 cattle at one time. Tovreas have their own feeding formula, which they have developed themselves, and this produces a quality of beef which is recognized as the best in the entire country. This firm now supplies beef to all parts of the United States, including Army and Navy contracts, and some sales are made to foreign countries. A large percent of the product now goes to a market developed during the past few years on the Pacific Coast.

It is estimated that 200,000 Arizona people depend on the livestock industry for their livelihood.

Tovreas are pioneers in beef grading and have developed a highly standardized grading system. (Tonto Bulletin)

ROOSEVELT DISTRICT DEVELOPS THE ELECTRIFIED FENCE

How man can use the brains that the Almighty gave him, in coordinating use of animals and earth, is demonstrated by the ingenious way in which officials of the Roosevelt Irrigation District have worked out a solution of the problem of keeping vegetation from overgrowing the banks of the laterals in the District. According to the August 2 issue of ARIZONA FARMER, keeping laterals clean is no longer a problem since the District has put cattle to grazing on the laterals, within confinement of electrified fences. All of the 10⁴ miles of lateral in the R.I.D. are now fenced on both sides as a result of experiments begun three years ago. Between the fences this summer, about 400 cattle are feeding on Johnson grass, Bermuda and other growth that would otherwise have to be removed at heavy cost.

"In the winter, of course," states the article, "there is little feed along the laterals. Cattle are turned in about March 15 but no charge is made until May 15. From then on, half a cent a day is charged for each animal pastured; also, any farmer living along a lateral is welcome to turn in his stock. Johnson grass has almost disappeared, in sharp contrast to overgrown farm ditches often seen right beside the laterals. No seed is produced to be carried on to the farms. Bermuda holds its own but is kept pastured down close and really serves a purpose in preventing washing. Last summer the laterals were absolutely clean. This year they don't look quite so good because the winter and spring rains brought up a lot of annuals that stock won't eat. Some handwork and burning is going to be necessary, but by no means anything like what was required in the old days before electrified fencing."

The fence on either side of a lateral consists of two strands of barbed wire attached to steel posts. The upper wire is charged with enough current to give an animal that tries to push under the wire a shock that is not dangerous but is enough to keep that cow or mule from trying to break out again. The lower wire is grounded. There are 17 chargers on the system. A charger box contains two 1-ampere fuses so the current is kept comparatively weak.

The ARIZONA FARMER quotes John P. Van Denburgh, project manager, as saying this system is a big money-saver. Rufus (Rusty) Kendrick, maintenance superintendent, says that it also means better irrigation service, since the laterals are always ready to carry water. There is no waiting while men chop, hoe or burn the weed growth.

PLASTIC PLANE

For the first time on record a plastic plane, the Timm Aircraft Co. Trainer has been approved by the Civil Aeronautics Authority. Made of laminated wood and phenolic resin, by a process in which thin layers of spruce, laid cross grain, are cemented with the plastic, shaped, and then baked, the plane is claimed to be twenty percent lighter than one made of metal. C. W. Timm, president of the company, pointed out that mass production of the plane would not require machine tools or many highly skilled workers, and that carpenters and cabinet makers could be readily trained for the job. Another plastic plane, built by the United States Plywood Corp. under the Vidal molding patents, is undergoing Army tests.
(Conservation News Digest)



